

REMARKS

This application is rejected under 35 U.S.C. § 112, first paragraph, for the reasons noted in the official action. The inadequate written description rejection is acknowledged and respectfully traversed in view of the following remarks. Claims 26-29 are canceled thereby overcoming the raised 35 U.S.C. § 112, first paragraph, rejection. In addition, claims 10-17 are also canceled from this application.

Next, claims 10-29 are rejected, under 35 U.S.C. § 102(b), as being anticipated by Khoe `195 (WO 95/11195). The Applicant acknowledges and respectfully traverses the raised anticipatory rejection in view of the following remarks.

Khoe `195 describes a method of oxidizing Fe(II) to Fe(III) in the presence of an oxidant, such as pure oxygen or air, and sulphur (IV) as a substance "which is both capable of being oxidized and increasing the rate of reaction of Fe(II) to Fe(III) when subjected to UV radiation" (page 6, lines 12-15, the Example 9 on page 17 and page 19, lines 11-16). Khoe `195 only discloses the inorganic species for oxidization being Fe(II). The Applicant respectfully submits that the exclusion of Fe(II), in claim 18, from the inorganic species being oxidized is clearly novel over the disclosure by Khoe `195.

Khoe `195 describes a method of oxidizing Fe(II) in the presence of S(IV) in order to increase the reaction rate of Fe(II) to Fe(III) when Fe(II), as a photoabsorber, is subjected to UV radiation. In contrast to the method of Khoe `195, amended claim 18 now recites "a method for oxidizing an inorganic species other than iron(II) in an aqueous solution comprising the steps of: (i) supplying an oxidizable source of sulphur as a photoabsorber, and oxygen to the solution; and (ii) irradiating the solution with UV light such that the species is oxidized." That is, the photoabsorber is the oxidizable source of sulphur, and not Fe(II) as disclosed in Khoe `195.

Furthermore, the method of the present invention is distinguished from Khoe `195 by the inorganic species to be oxidized. As currently claimed, the present application limits the method of oxidization to "inorganic species other than iron(II)".

Hence, the main problem addressed by the present invention is a method for removing trace quantities of oxidizable inorganic contaminants in aqueous solutions, especially contaminants in human drinking water (see page 5, lines 30-32 of the present application).

The novel method, as per amended claim 18 of the present invention, is adjusted such that the oxidizable source of sulphur absorbs UV light and is oxidized by the oxygen present in the solution. Subsequently, the oxidized source of sulphur oxidizes the inorganic species present in the solution in order to achieve the advantageous of the present invention. Namely, the method of the present invention enables removal from water of oxidizable inorganic contaminants present in trace quantities in the water (e.g., to be used in a drinking water treatment facility).

Contrary thereto, Fe(II) present in the solution of Khoe `195 absorbs the UV light and not the additionally added agents other than Fe(II) such as, for example, As(III), H_3PO_3 , S(IV), Mn(II), Ce(III), all of which increase the rate of oxidation of Fe(II) to Fe(III) when irradiated with UV light (see Example 9 on page 17 of Khoe `195).

Therefore, Khoe `195 does not teach, suggest or disclose the use of an oxidizable source of sulphur as a photoabsorber in a method for treating inorganic contaminants in trace quantities, as presently claimed. Nor does Khoe `195 teach, suggest or disclose the specific selection of S(IV) in a method for the treatment of drinking water having trace oxidizable contaminants such as arsenic, manganese, and cerium. Hence, the Applicant respectfully submits that amended claim 18 is both novel and non-obvious over Khoe `195 and the raised rejection, in view of that citation, should be withdrawn at this time.

Claims 10-29 are also rejected, under 35 U.S.C. § 103, as being unpatentable in view of Khoe `195 (WO 95/11195). The Applicant acknowledges and respectfully traverses the raised obviousness rejection in view of the following remarks.

The Applicant respectfully submits in view of the above remarks, that the Khoe `175 reference still fails to in any way teach, suggest or disclose the above distinguishing features of the presently claimed invention note above. As such, both the raised anticipatory and

09/463,423

obviousness rejections should be withdrawn at this time in view of the above amendments and remarks. If any further amendment to this application is believed necessary to advance prosecution and place this case in allowable form, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

In view of the foregoing, it is respectfully submitted that this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,



Michael J. Bujold, Reg. No. 32,018

Customer No. 020218

Davis & Bujold, P.L.L.C.

Fourth Floor

500 North Commercial Street

Manchester NH 03101-1151

Telephone 603-624-9220

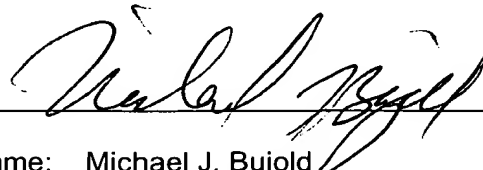
Facsimile 603-624-9229

E-mail: patent@davisandbujold.com

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service, with sufficient postage, as First Class Mail in an envelope addressed to: Director of the United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450.
March 18, 2004.

By: _____



Print Name: Michael J. Bujold